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| APPLICATION NO.       | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------------|-------------|----------------------|---------------------|------------------|
| 10/755,019            | 01/08/2004  | Junichi Nakai        | 60549 (70801)       | 8951             |
| 21874                 | 7590        | 06/13/2005           | EXAMINER            |                  |
| EDWARDS & ANGELL, LLP |             |                      | NHU, DAVID          |                  |
| P.O. BOX 55874        |             |                      | ART UNIT            |                  |
| BOSTON, MA 02205      |             |                      | PAPER NUMBER        |                  |

2818

DATE MAILED: 06/13/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/755,019

Applicant(s)

NAKAI ET AL.

Examiner

David Nhu

Art Unit

2818

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 April 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) 1-5 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 6, 7 and 9 is/are rejected.
- 7) ☒ Claim(s) 8 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 01.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTIONS

### *Election/Restrictions*

Applicant's election of Group II (Claims 6-9) is acknowledge. Claims 6-9 are remained for examination. Accordingly, claims 1-5 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

### *Drawings*

1. *Figures 3, 4a-4e should be designated by a legend such as—Prior Art—because only that which is old is illustrated. See MPEP & 608.02(g).*

### *Double Patenting*

2. **Claims 6** of the application No. 10/755,019 are rejected under the judicially created doctrine of obviousness-type double patenting over **claims 1, 3 of U. S. Patent No. 6,903,395 B2** since the claims, if allowed, would improperly extend the "right to exclude" already granted in the patent.

*The subject matter claimed in the instant application and similar language recited in the patent claims obviously depict a similar method having either same steps and/or same materials, and such is also disclosed in both the patent and the instant application.*

### *Claim Rejections - 35 USC § 103*

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2818

4. Claims 6, 7, 9, are rejected under U.S.C 103(a) as being unpatentable Background of Invention (BOI) in view of Maruyama et al et al (6,504,188 B1).

**Regarding claim 6**, BOI, (see figures 3, 4a-4e, pages 1-6), teaches a semiconductor device comprising: a semiconductor substrate 21 including a photoelectric conversion section; a transparent film 30 formed on the semiconductor substrate, the transparent film having a concave portion above the photoelectric conversion section; and an intralayer lens 74 formed on the transparent film, the intralayer lens having a convex portion facing the concave portion (see figures 4c, 4e).

BOI fails to teach the intralayer lens being made of a photosensitive material having a refractive index higher than that of the transparent film.

However, Maruyama, (see figures 3, col. 6, lines 30-48, col. 8, lines 38-40), teaches the intralayer lens 37 being made of a photosensitive material having a refractive index 36 higher than that of the transparent film 35.

Regarding claims 7, 9, BOI, (see pages 1-6, Maruyama, figures 3-6), also teach the photosensitive material is an annealing/curing resin containing a metal oxide.

### ***Allowable Subject Matter***

5. Claims 8 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Claims 8 includes allowable subject matter since the prior made of record and considered pertinent to the applicant's disclosure does not teach or suggest the claimed limitations.

Because BOI and Maruyama do not teach the resin becomes alkali-soluble by ultraviolet irradiation.

### **Conclusion**

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: maegawa'397, Park'040, Sano'154, Endo'640, are cited as of interest.

7. A shortened statutory period for response to this action is set to expire 3 (three) months from the date of this letter. Failure to respond within the period for response will cause the application to become abandoned (see 710.02 (b)).

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Nhu, (571)272-1792. The examiner can normally be reached on Monday-Friday from 7:30 AM to 5:00 PM. The examiner's supervisor, David Nelms can be reached on (571)272-1787.

*The fax phone number for the organization where this application or proceeding is assigned is (703)872-9306.*

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

*Information regarding the status of an application may be obtained from the patent application information retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR*

Art Unit: 2818

system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

David Nhu



June 9, 2005